Math 203
Linear Algebra
Fall - 2010

Instructor: Gregory Cochran
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Office Hours: Monday 2-3pm, Thursday 11am-12pm.
Textbook: *Linear Algebra and its Applications, 3rd Ed.*, David Lay Pearson, 2006.

Course Topics: This is a course about solving linear equations with an arbitrary number of variables. We will discuss the concepts of existence and uniqueness of a solution to such a system. An introduction of matrix and vector multiplications will then be discussed. Linear transformations will also be introduced. We will then make significant generalizations about all these concepts with applications. Lastly we will talk about eigenvalues and eigenvectors, orthogonality, and least squares algorithms.

Prerequisites: The prerequisite for this course is a C or better in Math 114 or its equivalent. No exceptions will be made!

Homework: Homework will be assigned regularly. For each problem set, there will be problems to do on your own and problems to be turned in. On the next page is a list of all uncollected homework. You are *strongly* encouraged to do all the uncollected homework as this will prepare you for the graded homework. The collected homework will be assigned each Friday and will due the following Friday. The collected homework will count 15% of your final grade. It should be stressed that success in this course is highly dependent on doing the homework, both collected and uncollected.

Tests: There will be 2 in-class tests and a comprehensive final exam. Each test is worth 20% of your final grade. The final exam will be worth 30%. The final exam is scheduled for Monday December 20, 10:30-1:30pm.

MatLab: You will be required to complete 3 assignments using the programming software MatLab. MatLab is available in the computer labs in the Johnson Center and Innovation Hall. These assignments will count 15% of your grade. You may work in groups of no more than 3 people if you choose. However, you are not permitted to discuss the assignments with any other person in the class except your partner.

Assistance: Extra help will be provided in the Math Tutoring Center, located in Johnson Center Room 344.

Student Accommodations: If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Resources at 703/993-2474. All academic accommodations must be arranged through that office.

Honor Code: As always, the George Mason University Honor Code is in effect. You are not permitted to discuss any tests material before it has been handed back. You may work together on the homework, but any write-up to be handed in must reflect your understanding and your knowledge of the problems. On all MatLab assignments, you will be required to turn in all programming work. Any violation of these offenses will result in an Honor Code Violation and will be sent to the Office of Academic Integrity.

Late Work: Each assignment will be given a due date. I will not collect late work under any circumstance. It is your responsibility to make sure I get the assignment on time! If you have an excused absence, you are required to turn the assignment in before it is due. If you must miss an exam, you are required to notify me before the exam date to schedule an alternative date. Exams must be made up before the next class period.

Uncollected Homework:
(1.1): 7-15 (odd), 19-15 (odd)
(1.2): 1-13 (odd), 19-15 (odd)
(1.3) 7-25 (odd), 29,30
(1.4) 1-5, 7- 25 (odd)
(1.5) 1, 5 - 19 (odd), 23
(1.7) 1-5 (odd), 11-25 (odd), 31, 33
(1.8) 17- 33 (odd)
(1.9) 7, 13, 15, 21-35

(2.1) 1-27 (odd)
(2.2) 1-21 (odd), 25, 35
(2.3) 1-5 (odd), 11 - 21 (odd), 27, 33, 37, 39
(2.5) 1-11(odd), 25

(3.1) 1,3, 9,11,13, 19, 21, 25, 39, 41,
(3.2) 1-5 (odd), 15-35 (odd)

(4.1) 1-15 (odd), 19-25 (odd)
(4.2) 1-7 (odd), 17- 25 (odd), 31-35 (odd)
(4.3) 1,3, 11,15, 19-27 (odd)
(4.4) 1-9 (odd), 13 - 17 (odd), 25 -29 (odd)
(4.5) 1,3, 7, 11-23 (odd), 29
(4.6) 1-13 (odd), 17, 19
(4.7) 1 - 9 (odd), 13

(5.1) 1,3,5, 9-25 (odd)
(5.2) 1,3, 7 - 15 (odd) 21

(5.3) 1,5 - 13 (odd), 19,21
(5.4) 1-23 (odd)

(6.1) 1- 11 (odd), 15 - 19 (odd), 25,27
(6.2) 1,3,7-15(odd), 23-29 (odd)
(6.3) 1-5 (odd), 9-23 (odd)
(6.4) 1 - 9 (odd), 13 - 17 (odd)
(6.5) 1-11 (odd), 15 - 17 (odd), 23,25